IN THE CLAIMS:

Please amend claims 1, 6, 10, 13, 17-20, 22-25;

Please cancel claims 2-5 and 14-16 without prejudice or disclaimer; and

Please add new claims 26-29 as follows.

1. (Currently Amended) A ~~radio equipment~~ system, comprising:

~~baseband means for~~a modem configured to perform modulating and demodulating;

~~digital means for interfacing~~a digital interface configured to interface; and

a radio ~~frequency means for~~ configured to perform radio frequency communication including ~~digitally operating~~ a radio frequency ~~control means~~ controller and a radio frequency parts ~~means~~, and

wherein the baseband means and the radio frequency means respectively form physically separate modules that are connected with each other by the digital means for interfacing.

2-5. Cancelled

6. (Currently Amended) A method, comprising:

providing a radio equipment comprising physically separate modules of a baseband modem and a radio ~~frequency unit including~~ comprising a digitally operating radio frequency ~~control unit~~ controller and ~~a~~ radio frequency parts ~~unit~~; and

providing a digital interface ~~for connection of~~ to connect the baseband modem ~~module~~ and the radio ~~frequency unit module~~ with each other within the radio ~~equipment~~.

7. (Currently Amended) The method according to claim 6, further comprising:

sending, from the baseband modem ~~module~~ to the radio ~~frequency unit module~~, transmitter data including in phase component signals and quadratic phase component signals;

sending, from the baseband modem ~~module~~ to the radio ~~frequency unit module~~, transmitter clock signals;

sending, from the baseband modem ~~module~~ to the radio ~~frequency unit module~~, control signals providing support for type-specific functionalities;

sending, from the radio ~~frequency unit module~~ to the baseband modem ~~module~~, receiver clock signals;

sending, from the radio ~~frequency unit module~~ to the baseband modem ~~module~~, receiver data including in-phase component signals and quadratic phase component signals; and

exchanging, between the radio ~~frequency unit module~~ and the baseband modem ~~module~~, microprocessor signals;

wherein each of said sendings and said exchanging are driven by the digital interface.

8. (Original) The method according to claim 7, said method further comprising

providing all signals as digital signals, and wherein a clock rate is provided as a system symbol clock rate, except for a case that a function in the modem utilizes two samples per symbol where a double symbol rate frequency is supported.

9. (Previously Presented) The method according to claim 6, further comprising:

forward error correction coding and decoding;

symbol mapping and demapping; and

implementing the forward error correction coding and decoding and symbol mapping and demapping in the baseband modem.

10. (Currently Amended) The method ~~system~~ according to claim 6, wherein the radio frequency ~~control unit~~ controller within the ~~module forming~~ the radio ~~frequency unit includes~~ comprises respective control loops performing pulse shape filtering, transmitter and receiver correction, receiver timing recovery, and carrier recovery.

11. (Original) The method according to claim 10, wherein the transmitter and receiver correction comprises a quadratic error correction, a balance error correction, a bias error correction, and a gain error correction.

12. (Original) The method according to claim 10, wherein the control loops perform independently of the modulation or traffic type.

13. (Currently Amended) An ~~interface~~ apparatus, comprising:

digital means for interfacing; ~~for connecting a~~

radio means comprising radio controlling means and radio parts means;

baseband means for modulating and demodulating ~~module~~ with ~~a~~ the radio ~~frequency~~ means ~~for radio frequency communication module including digitally operating radio frequency control means and radio frequency part means within a radio equipment,~~ so as to enable a physical separation of ~~wherein~~ the baseband means ~~module~~ and the radio ~~frequency~~ means ~~module are physically separated, and~~, and

wherein the digital means ~~is configured to perform~~ performs the signal exchange between the ~~modules~~ radio means and the baseband means.

14-16. Cancelled

17. (Currently Amended) A ~~radio equipment~~ system, comprising:

a baseband modem;

a digital interface; and

a radio ~~frequency unit including~~ comprising a digitally operating radio frequency ~~control unit~~ controller and ~~a~~ radio frequency parts ~~unit~~, and

wherein the baseband modem and the radio ~~frequency unit~~ are respectively ~~form~~ configured as physically separate modules that ~~are~~ may be connected with each other by the digital interface.

18. (Currently Amended) The system according to claim 17, wherein the ~~module forming the~~ baseband modem comprises:

a ~~correction unit~~ corrector configured to perform forward error correction coding and decoding; and

a symbol ~~mapping unit~~ mapper configured to perform symbol mapping and demapping.

19. (Currently Amended) The system according to claim 17, wherein the radio frequency ~~control unit~~ controller comprises

respective control loops configured to perform pulse shape filtering, transmitter and receiver correction loops,

a timing ~~recovery unit~~ recoverer configured to perform receiver timing recovery, and

a carrier ~~recovery unit~~ recoverer configured to perform carrier timing recovery.

20. (Currently Amended) The system according to claim 19, wherein the transmitter and receiver correction loops comprise

a quadratic error ~~correction unit~~ corrector configured to perform quadratic error correction,

a balance error ~~correction unit~~ corrector configured to perform balance error correction,

a bias error ~~correction unit~~ corrector configured to perform bias error correction, and

a gain error ~~correction unit~~ corrector configured to perform bias error correction.

21. (Previously Presented) The system according to claim 19, wherein the control loops are independent of the modulation or traffic type.

22. (Currently Amended) ~~A digital interface, configured to~~An apparatus, comprising:

a connector configured to connect a baseband modem ~~module~~ with a radio ~~frequency unit module including~~ comprising a digitally operating radio frequency ~~control unit~~ controller and ~~a~~ radio frequency ~~part unit~~ parts within ~~a~~ the radio ~~equipment, wherein~~ so as to enable a physical separation of the baseband modem ~~module~~ and the radio ~~frequency unit module are physically separated~~; and

an exchanger configured to perform the signal exchange between the modules.

23. (Currently Amended) The ~~interface~~ apparatus according to claim 22, wherein the exchanger is further configured to exchange the signals ~~are exchanged~~ serially.

24. (Currently Amended) The ~~interface~~ apparatus according to claim 22, wherein the exchanger is further configured to exchange the signals ~~are exchanged~~ in parallel.

25. (Currently Amended) The ~~interface~~ apparatus according to claim 22, further comprising:

a ~~first sending unit~~ transmitter signal component transmitter configured to send, from the baseband modem ~~module~~ to the radio ~~frequency unit module~~, transmitter data ~~including~~ comprising in-phase component signals and quadratic phase component signals;

a ~~second sending unit for sending~~ transmitter clock signal transmitter configured to send, from the baseband modem ~~module~~ to the radio ~~frequency unit module~~, transmitter clock signals;

a ~~third sending unit~~ control signal transmitter configured to send, from the baseband modem ~~module~~ to the radio ~~frequency unit module~~, control signals ~~providing~~ to support ~~for~~ type-specific functionalities;

a ~~fourth sending unit~~ receiver clock signal transmitter configured to send, from the radio ~~frequency unit module~~ to the baseband modem ~~module~~, receiver clock signals;

a ~~fifth sending unit~~ receiver signal component transmitter configured to send, from the radio ~~frequency unit module~~ to the baseband modem ~~module~~, receiver data ~~including~~ comprising in-phase component signals and quadratic phase component signals; and

an ~~exchanging unit~~ exchanger configured to exchange, between the radio frequency unit module and the baseband modem module, microprocessor signals.

26. (New) An apparatus, comprising:

a radio comprising a digitally operating radio frequency controller and radio frequency parts, and

wherein the radio is configured to be connected to a baseband modem, said radio being physically separate from said baseband modem, by a digital interface.

27. (New) The apparatus according to claim 26, wherein the radio frequency controller comprises:

respective control loops configured to perform pulse shape filtering, transmitter and receiver correction loops,

a timing recoverer configured to perform receiver timing recovery, and

a carrier recoverer configured to perform carrier timing recovery.

28. (New) The apparatus according to claim 27, wherein the transmitter and receiver correction loops comprise:

a quadratic error corrector configured to perform quadratic error correction,

a balance error corrector configured to perform balance error correction,

a bias error corrector configured to perform bias error correction, and

a gain error corrector configured to perform bias error correction.

29. (New) The apparatus according to claim 27, wherein the control loops are independent of the modulation or traffic type.